

**CHEMISTRY 347**  
**HONORS ORGANIC CHEMISTRY LABORATORY**  
**Spring 2006**

**Instructor:** Professor Paul B. Hopkins  
Office: Bagley 109H  
Phone: 206.543.1613; email: chair@chem.washington.edu  
Office Hours: Thursdays, 2:00-3:00 p.m. or by appointment  
(Professor Hopkins is not always available during regular office hours.)

**Teaching Assist:** Scott Gable (Section AA – Lab meets W/F 1:30-4:20 p.m., CHB 127)  
Office: BAG 192F; Phone: 206.221.6108  
E-mail: gables1@u.washington.edu  
Office Hours: TBA  
Josh Hunter (Section AB – Lab meets W/F 12:30-3:20 p.m., CHB 111)  
Office: BAG 192F; Phone: 206.221.6108  
E-mail: hunter68@u.washington.edu  
Office Hours: TBA

**Weekly Lecture:** Tuesdays, 10:30-11:20, BAG 261

**Laboratory:** Wednesdays/Fridays, 1:30-4:20 p.m., CHB 127 (AA); 12:30-3:20 p.m., CHB 111 (AB)

**Required Text:** *Introduction of Organic Laboratory Techniques, A Microscale Approach*, Third Edition, Pavia, Lampman, Kriz, and Engle (PLKE)

**Exams/Quizzes:** One comprehensive examination: Monday, June 5, 2006, 10:30 a.m.

<b>Grading:</b>	2 reports for wet unknowns @ 70 pts each	140
	2 reports for spectroscopic unknowns @ 50 pts each	100
	Glucose Acetylation	25
	Sulfa drug	50
	Combinatorial drug discovery lab	100
	Final Examination	100
	Teaching assistant evaluation	50
	Lab notebook	25
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	Total Points	590

**LABORATORY SAFETY:** All students in the laboratory are required by state law to wear Department-approved safety goggles at all times. Department policy states “undergraduates not wearing goggles may be dismissed from the laboratory immediately. A second infraction will result in dismissal for the remainder of the quarter. No make-ups will be permitted.” Approved safety goggles are available from the University Bookstore or the Chemistry Stockroom (Bagley 271). Students are only allowed to work in the laboratory during their scheduled sections and under the supervision of their assigned Teaching Assistant.

**Laboratory Reports:** In general, reports consist of a pre-lab due at the beginning of the lab period and a final report. The pre-lab portion should be written in your lab notebook and a photocopy or carbon copy is to be given to your Teaching Assistant at the beginning of the lab period. You will not be allowed to begin the experiment until the pre-lab is completed. Pre-labs for preparative should consist of balanced equations for the reactions, reagent tables, indications of possible side-reactions, summary of the experimental procedure (in your own words), and a schematic representation of the isolation/purification procedure. The pre-labs for the unknown analyses should contain a strategic plan for the day (ca. 1 page) listing the tests you plan to carry out on each of your unknowns. If you are making derivatives, write out balanced equations. Examples of pre-labs are given in your handout (see also PLKE pp. 20-26). The final reports will be in the form of a handout, except for the sulfa drug project where a typewritten report must be turned in.

**Laboratory Notebooks:** Purchase a BOUND notebook; spiral and three-ring notebooks are not acceptable. When performing an experiment, write down the procedure as you do it, note relevant observations, including your final results (mp, yield, etc.). A thorough description of the contents and organization of your notebook is given in the Chem 347 handout (see also discussion in PLKE pp. 20-26). There will be two spot-checks of your notebook during the quarter (see the Chem 347 Handout for grading guidelines).

**Lab Policies:** Failure to comply with lab policies will result in dismissal from the lab.

1. As described above, all students must wear approved safety goggles while in the laboratory. Wearing contact lenses in the laboratory is not recommended. Solvent fumes can become trapped between contact lenses and the eye causing irritation.
2. Dress appropriately for safety in the laboratory. Open-toed shoes or sandals are not to be worn in the laboratory. Lab coats are required.
3. You are only allowed to be in the laboratory during your scheduled lab period or by arrangement with your instructor.

**Final Exam—Monday, June 5, 2006, 10:30-12:20 p.m. (comprehensive).**

*Note:* If you are absent from the final examination, and you are ineligible for an incomplete according to UW regulations, then you will receive a course grade of 0.0. If an incomplete is given, you must take the final exam for the same course in the next regular academic quarter in which it is offered to remove the incomplete.

*If you would like to request academic accommodations due to a disability, please contact Disabled Student Services, 448 Schmitz, (206) 543-8924 (V/TTY). If you have a letter from Disabled Student Services indicating you have a disability that requires academic accommodations, please present the letter to me so we can discuss the accommodations you might need for class.*

<b>Date</b>	<b>Activity</b>	<b>Subject</b>	<b>Reading</b>	<b>Report Due</b>
March 28	Discussion	Introduction	Handout pp. 2-6; Techniques 1-16 (PLKE 512-730)	
29	Laboratory	Check-in		
31	Laboratory	Glucose Acetylation		
April 4	Discussion	Sulfa Drugs Organic Qualitative Analysis	Handout, "Sulfa Drugs" PLKE pp. 428-468, Appendix 1	
5	Laboratory	Sulfa Drugs		
7	Laboratory	Sulfa Drugs (cont'd)		
11	Discussion	Organic Qualitative Analysis	PLKE pp. 428-468, Appendix 1	
12	Laboratory	Practice Classification Tests		Notebook, Glucose Acetylation
14	Laboratory	Unknowns		
18	Discussion	Spectroscopy: IR	PLKE Appendix 3	
19	Laboratory	Unknowns		Sulfa Drugs
21	Laboratory	Unknowns		
25	Discussion	Spectroscopy: NMR	PLKE Appendices 4, 5	
26	Laboratory	Unknowns		
28	Laboratory	Unknowns		
May 2	Discussion	Spectroscopy: MS	PLKE Appendix 6	
3	Laboratory	Unknowns		Wet Unknown 1
5	Laboratory	Unknowns		
9	Discussion	Spectroscopy: Combined	Handout p. 31	
10	Laboratory	Unknowns		Wet Unknown 2
12	Laboratory	Unknowns		
16	Discussion	Combinatorial Drug Discovery	Handout, "Combinatorial Drug Discovery"	
17	Laboratory	Unknowns		Spectroscopic Unknown 1
29	Laboratory	Combinatorial Drug Discovery lab		
23	Discussion	Chemical Literature	Handout pp. 32-37	
24	Laboratory	Combinatorial Drug Discovery lab (cont'd)		Spectroscopic Unknown 2
26	Laboratory	Combinatorial Drug Discovery lab (cont'd)		
30	Discussion	Catch-up		
31	Laboratory	Combinatorial Drug Discovery lab (cont'd)		
June 2	Laboratory	Lab check-out		Combinatorial Drug Discovery, Notebook
5	<b>FINAL EXAM</b>			